

The applicants have applied for 401 Water Quality Certification for impacts associated with construction of a replacement bridge for the existing Champ Clark Bridge. The project will replace the existing Champ Clark Bridge on a new alignment approximately 50 feet south. New intersection configurations will be required at the junction of Route 79 and Route 54 in Louisiana, MO. The new alignment in Illinois will impact approximately 7.02 acres of forested wetland and 0.39 acres of emergent wetland (7.41 acres total). Permanent wetland impacts will be mitigated at the Illinois Department of Transportation LaGrange Wetland Mitigation Bank in Brown County, IL. Temporary impacts will be mitigated on-site. New river piers will also permanently impact the river, although removal of the existing bridge will offset these impacts. Temporary impacts to the river will result from a rock causeway, cofferdams, and dredging.

Identification and Characterization of the Affected Water Body.

The bridge crossing of the Mississippi River is at a point where 16,640.0 cfs of flow exists upstream of the bridge during critical 7Q10 low-flow conditions. The Mississippi River is classified as a General Use Water. The Mississippi River is not listed as a biologically significant stream in the 2008 Illinois Department of Natural Resources Publication *Integrating Multiple Taxa in a Biological Stream Rating System*, nor is it given an integrity rating in that document. The Mississippi River, Waterbody Segment, K-21, is listed on the draft 2016 Illinois Integrated Water Quality Report and Section 303(d) List as impaired for fish consumption use with potential causes given as mercury and polychlorinated biphenyls and primary contact use with potential cause given as fecal coliform. Aquatic life and aesthetic quality uses are fully supported. This segment of the Mississippi River is subject to enhanced dissolved oxygen standards.

The Illinois Natural History Survey (INHS) conducted a wetland survey within the project study area on November 12-13, 2013. Survey methods and results are described in the attached wetland delineation report. A total of 96.69 acres of wetland were identified within the study area consisting of wet meadow, wet floodplain forest, and wet meadow/marsh, much of which is on US Army Corps of Engineers (USACE) property. The floristic quality index values ranged from 0.6 to 17.2 with a coefficient of conservatism range of means of 0.3 to 3.3, which indicates that these wetlands are generally considered of low vegetative quality with species typical of disturbed habitats. The total wetland impact is 7.41 acres (4.37 permanent; 3.04 temporary). Most wetland impacts occur on USACE land managed for fish and wildlife resources (approximately 6 acres). The project will result in permanent impacts to 4.37 acres of wetland including approximately 4.25 acres of forested wetland and approximately 0.12 acres of emergent wetland. The project will temporarily impact 3.04 acres of wetlands including approximately 2.78 acres of forested wetland and 0.26 acres of emergent wetland. Temporary impacts will be replaced on-site at a 1:1 ratio by restoring pre-construction elevations, topography, and hydrology. Additionally, areas of temporary impacts will be re-seeded with native herbaceous floodplain vegetation. Natural re-generation of forested wetland is expected to occur quickly given the predominance of cottonwood, and silver maple surrounding the impacted area. Permanent impacts to wetlands are unavoidable and will be appropriately mitigated with the purchase of wetland mitigation credits at the LaGrange Wetland Mitigation Bank in Brown County, Illinois.

Identification of Proposed Pollutant Load Increases or Potential Impacts on Uses.

The project will consist of impacts from 1) construction of a temporary haul road, causeway, and work pad, 2) permanent fills in wetland for new roadway alignment in Illinois, 3) permanent fills in river for pier construction, and 4) dredge discharges associated with construction. The temporary impacts include increased sedimentation and suspended solids.

Fate and Effect of Parameters Proposed for Increased Loading.

The construction of a temporary haul road, causeway, and work pad will be local and temporary. Increases in suspended solids will be minimized by implementing BMPs in accordance with local, state, and federal regulations.

The project will have approximately 4.37 acres of permanent impacts to wetlands (4.25 acres of forested wetland and 0.12 acres of emergent wetlands) and approximately 3.04 acres of temporary impacts to wetlands (approximately 2.78 acres of forested wetland and 0.26 acres of emergent wetlands). The permanent impacts will be mitigated at a ratio of 2:1 at the LaGrange Wetland Mitigation Bank and the temporary impacts will be mitigated on-site. The temporary impacts will be mitigated on-site at a ratio of 1:1.

The permanent fills in the river for pier construction will be offset by the removal of the existing piers. There will also be local and temporary impacts. During demolition of the existing bridge, millisecond delays and repelling charges will be used to scare fish from the area.

The dredge discharges associated with construction will be local and temporary. Increases in suspended solids will be minimized by implementing BMPs in accordance with local, state, and federal regulations.

Purpose and Social & Economic Benefits of the Proposed Activity.

The purpose of this project is to provide a reliable, safe, and cost-efficient Route 54 crossing over the Mississippi River between, the city of Louisiana, Missouri and Pike County, Illinois. The historic bridge is structurally deficient and requires continual maintained. The bridge deck is 20 feet wide with no shoulders and has a vertical clearance of 14.7 feet. Based on MoDOT and IDOT standards, these parameters render the bridge as functionally obsolete with substandard land width, vertical clearance, and shoulder provisions.

Assessments of Alternatives for Less Increase in Loading or Minimal Environmental Degradation.

Other alternate alignments were considered. Although the selected alternative would impact more parcels, affect slightly more acres of forested wetlands, and would result in more tree clearing, it would require less right of way, result in fewer commercial relocations, require less floodplain encroachment, have greater avoidance of Section 4(f) protected resources, and would have lower project cost than the other reasonable alternatives.

Summary Comments of the Illinois Department of Natural Resources, Regional Planning Commissions, Zoning Boards or Other Entities.

On May, 23, 2012, the IDNR EcoCAT web-based tool was used and indicated that there were endangered/threatened species (spectaclecase mussels, black sandshell mussels, and lake sturgeon) present in the vicinity of the discharge. IDNR evaluated the submittal and required mussel surveys and a fish survey.

The mussel surveys were conducted in July 2012 by INHS, October 2013 by MoDOT, and Missouri Department of Conservation, and in October 2014 by INHS. Combining the results of these surveys, 16 species of mussels were observed within the corridor. None of the species encountered as listed at the state or federal level.

INHS conducted a fish survey on August 8, 2012 and collected a total of 20 fish species. No state or federally listed species were encountered and all species were common inhabitants of the Mississippi River. In addition, and through discussions with representatives of the IDNR and INHS, the habitat within the survey area was not considered ideal spawning habitat for lake sturgeon.

Suitable roosting habitat for Indiana and northern long-eared bats has been identified within the project corridor. FHWA determined the project may effect, but is not likely to adversely affect these bat species based on seasonal clearing restrictions of suitable habitat to the winter months when bats are not present. A survey for potential roost trees within the USACE-owned land south in Illinois south of US 54 and between the River and the Sny Levee was completed on January 18, 2017. Forty-one potential roost trees were noted and these will be removed prior to April 1, 2017. USFWS concurred with the "Not Likely To Adversely Affect" determinations in their comments to the EA on August 12, 2016.

Additional bald eagle nest surveys will be conducted during the design phase to identify potential active nests within the vicinity of the bridge. If nests are found, National Bald Eagle Management Guidelines will be implemented.

IDNR terminated the consultation request on March 28, 2017, based on the applicants commitments stated in the April 2016 Environmental Assessment will be implemented to minimize and avoid impacts to all vicinity listed species and resources.

Agency Conclusion.

This preliminary assessment was conducted pursuant to the Illinois Pollution Control Board regulation for Antidegradation found at 35 Ill. Adm. Code 302.105 (antidegradation standard) and was based on the information available to the Agency at the time this assessment was written. We tentatively find that the proposed activity will result in the attainment of water quality standards; that all existing uses of the receiving stream will be maintained; that all technically and economically reasonable measures to avoid or minimize the extent of the proposed increase in pollutant loading have been incorporated into the proposed activity; and that this activity will benefit the community at large by providing a reliable, safe, and cost-efficient Route 54 crossing over the Mississippi River. Comments received during the 401 Water Quality Certification public notice period will be evaluated before a final decision is made by the Agency.